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Iowa Corn Yield Test, Results of 1924 Tests, Plans for 1925 Tests

Iowa Corn and Small Grain Growers' Association

Farm Crops Section, Iowa Agricultural Experiment Station

Office of Cereal Investigations, Bureau of Plant Industry, United States Department of Agriculture

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Iowa Corn Yield Test, Results of 1924 Tests, Plans for 1925 Tests

Abstract

A difference of 23 bushels per acre in yield was found between two samples of corn grown side by side in the same plot in south central Iowa in the 1924 yield test. While such a difference represents the maximum found in the yield test, it is no doubt a common difference which could be found between different strains grown in different communities throughout the cornbelt.

Disciplines

Agriculture | Agronomy and Crop Sciences

Barber, Wagon, Iowa, in 1924 with Warden Dent
IOWA

CORN YIELD TEST

RESULTS OF 1924 TESTS

PLANS FOR 1925 TESTS

CONDUCTED BY

Iowa Corn and Small Grain
Growers' Association

Cooperating with the

Farm Crops Section, Iowa Agricultural Experiment
Station

and the

Office of Cereal Investigations, Bureau of Plant
Industry, United States Department
of Agriculture

ASSOCIATION OFFICERS

President.....	George M. Allee, Newell
Vice-President.....	I. E. Proudfit, Altoona
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Assistant Secretary	John C. Eldredge, Ames
Assistant Secretary.....	R. M. Vifquain, Ames
Rep. Office of Cereal Investigations, U. S. D. A.....	A.A. Bryan, Ames

DISTRICT VICE-PRESIDENTS

- | | |
|-------------------------------|---------------------------------|
| 1. Simon Tjsoeam, Primghar | 7. Frank Trucks, Coon Rapids |
| 2. A. B. Schenck, Algona | 8. Leland Taylor, Mitchellville |
| 3. Theo. Gronna, Waterville | 9. Fred McCulloch, Hartwick |
| 4. Karl Hoffman, Ida Grove | 10. O. D. Stone, Elliott |
| 5. Emanuel Peterson, Harcourt | 11. H. R. Richards, Swan |
| 6. J. C. Bige, Cedar Falls | 12. Ray Redfern, Yarmouth |

THE BOARD OF DIRECTORS

Consists of the above named officers of the Association and the following ex-presidents:

John Sundberg, Sioux City	J. H. Petty, Elliott
F. H. Klopping, Neola	Fred McCulloch, Hartwick
F. D. Stein, West Liberty	W. E. Krizer, Eddyville

ENTRIES

(1) An entry fee of \$3.00 for each sample entered in each district will be charged for samples grown in Iowa. A charge of \$10.00 for each sample in each district will be made for samples from outside the state.

(2) Applications for entry together with entry fee should be mailed immediately to Joe L. Robinson, Secretary of the Iowa Corn and Small Grain Growers' Association at Ames, Iowa.

(3) A competitor may enter as many as three samples in any one district, providing each sample is of a different strain or variety.

(4) For each sample entered the competitor must supply, free of charge, four pounds of high germinating shelled seed corn ready to plant. This seed becomes the property of the Iowa Corn and Small Growers' Association when received by the Secretary.

(5) Each sample must be labeled distinctly as to the name and address of the grower, variety name of the corn if known, and the district of the state in which it is to compete.

(6) Sample should be shipped in heavy bags or strong containers to insure the corn reaching the Association in good condition.

(7) The preference of the majority of entrants will govern the number of kernels per hill to be planted in each district. Study these data carefully and indicate your preference on the application blank.

FIVE-YEAR RATE OF PLANTING DATA

No. Kernels Plant- ed Per Hill	No. of Stalks Per Hill at Harvest, All Sec- tions	BUSHELS PER ACRE			
		Northern Section	N. C. Section	S. C. Section	Southern Section
2	1.69	47.38	48.61	53.52	51.50
3	2.39	58.35	58.64	64.19	62.63
4	3.04	62.35	60.75	67.20	61.11
5	3.69	65.81	61.41	66.63	61.96

PREMIUMS FOR 1925 TEST

(1) The Banner Trophy is awarded annually by President Raymond A. Pearson to the Iowa grower whose entry produces the highest percent above the average yield of all entries in the three districts of any section. To win the trophy the entry must be the same kind of corn in all three districts of the section.

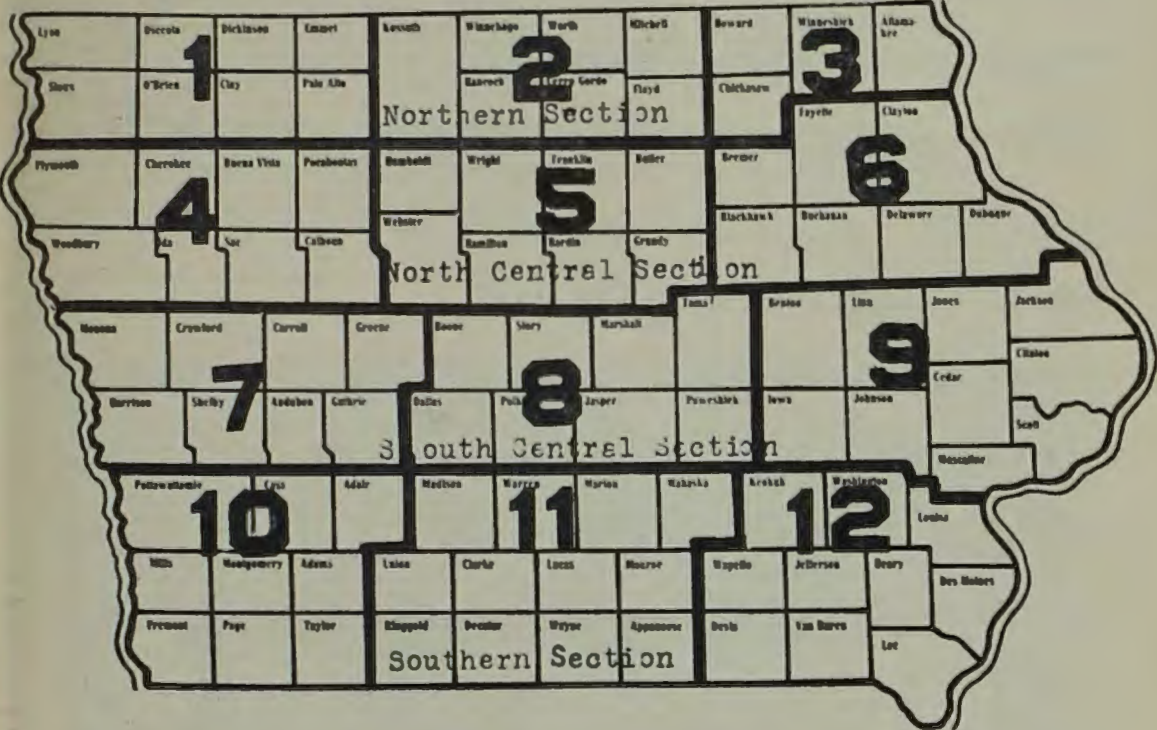
(2) A gold medal will be awarded to the entrant in each section whose corn gives the highest percent yield above the average of all samples included in the district in which the entry is made. All samples included in a section are eligible to compete for the gold medal whether included in one, two, or three districts. The yield made in a single district in comparison with the average yield in that district will be the basis of awards.

(3) In each district the Association will award a bronze medal for the highest yielding corn entered by a grower residing in that district where the test is made.

(4) The top one-third in each district will receive suitable ribbons from the Association.

(5) In a number of the counties the local farm bureaus offered premiums last year for the highest yielding sample from their particular counties. It is the plan to have this repeated again this year. Is your county offering a prize?

(6) Any entries made by the United States Department of Agriculture or the Iowa State College are not eligible for the Banner trophy nor for the gold or bronze medals.



The above map shows the division of the state into sections and districts for the state yield test.

APPLICATION FOR ENTRY

In the 1925 Corn Yield Test no entry will be accepted unless this form is filled out fully and completely. **Write carefully.**

I hereby make application for entry in the Yield Test of the Iowa Corn and Small Grain Growers' Association and agree to ship, prepaid, four pounds of high germinating shelled seed corn to the Association by May, 1925. I am the grower of this seed, and agree to abide by all the provisions of the contest. My entry fee is enclosed.

District in which corn is to compete.....

Have you entered this same corn in the yield test before? If so, what year?

Number of kernels preferred per hill.....

Variety or strain name.....

In what county and state was your entry grown?.....

From whom did you obtain your first seed?.....

How long have you produced this variety or strain?.....

Name

Post Office.....Rural Route.....

State

All applications should be mailed to the

Secretary, Iowa Corn and Small Grain Growers' Association,
Ames, Iowa.

(If you are not ready to make your entry, please inform the Secretary **NOW** that you expect to be in the 1925 test.)

RESULTS OF THE 1924 TEST

A difference of 23 bushels per acre in yield was found between two samples of corn grown side by side in the same plot in south central Iowa in the 1924 yield test. While such a difference represents the maximum found in the yield test, it is no doubt a common difference which could be found between different strains grown in different communities throughout the cornbelt. The state yield test is planned to determine the high yielding strains of corn in the different parts of the state. All entries are grown side by side in order to obtain conditions as nearly alike for all as possible. All entries are planted a sufficient number of times to insure an accurate comparison.

Some of the details of the test which will be of interest to those who had corn in the test in 1924, as well as to those who contemplate entering their corn the present year, are as follows:

Entries—1924

Total number entered—121.

Distribution by sections—Northern, 22; North Central, 37; South Central, 38; Southern, 24.

Entry Numbers

Each entry was assigned a number by which the corn was known throughout the season. The only record of these numbers, with the corresponding names and addresses of the owners of the samples, was placed in the Union National Bank at Ames and was not removed until the afternoon of the annual meeting of the Iowa Corn and Small Grain Growers' Association, at which time the envelope containing this information was opened in public. These precautions served to insure absolute fairness to all entered in the test.

Location of Testing Fields

Three testing fields were located in each of the four sections of the state, one in the eastern, one in the central, and one in the western part of Iowa. These testing fields were located as follows: Northern section, Sioux county, Hancock county, and Chickasaw county; North-Central section, Buena Vista county, Hardin county, and Delaware county; South-Central section, Harrison county, Story county, and Jones county; Southern section, Montgomery county, Warren county, and Henry county.

Planting

Each entry was planted in ten different plots in each of the fields. To insure an accurate drop, all samples were planted by hand.

Yield of Entries in 1924 Test

At the time the state yield test was inaugurated, it was agreed that only the names of the top one-third of the contestants in

each section would be made public. Only to the contestant himself are we making known his relative standing if he is below the top one-third.

The main purpose of the test is not to see how many bushels of corn can be produced per acre, but rather to compare the productiveness of different strains and types for each section when grown under average uniform conditions.

Maturity has generally been recognized as an important factor in determining yield. The 1924 test seemed to emphasize the fact that those corns having a large percent of moisture or which are too large and late for the section in which planted will not yield especially well. In general, those samples in this year's test having the lower percent of moisture at harvest time were the higher producers of dry shelled corn per acre.

STANDING OF ENTRIES IN EACH SECTION OF THE STATE IN 1924

Northern Section

Entry Bu. per			Variety	Name—Address—County		
Rank	No.	acre				
1	10	38.98	"F" & "44"	Geo. M. Allee, Newell, Buena Vista		
2	11	38.19	Golden King	Wm. McArthur, Mason City, Cerro Gordo		
3	8	38.13	Giffin's S. K.	G. V. Giffin, Ringsted, Palo Alto		
4	3	38.06	Golden Murdock	Hoyt E. Buttolph, Mitchell		
5	7	37.83	Reid's Reliance	A. H. Beckhoff, Lester, Lyon		
6	1	36.00	Smith's Y. D.	Wm. B. Smith, Nashua, Floyd		
7	22	35.71	Golden Jewel	Walter Oxley, Ossian, Winneshiek		
Entry Bu. per			Entry Bu. per			Rank
Rank	No.	acre	Rank	No.	acre	
8	5	35.27	13	16	33.98	18
9	17	34.86	14	18	33.87	20
10	19	34.58	15	13	33.79	15
11	4	34.16	16	9	33.30	21
12	12	34.02	17	6	33.27	2
						14
						29.36

North Central Section

Entry Bu. per			Variety	Name—Address—County		
Rank	No.	acre				
1	53	39.11	Wimple's Y. D.	Carl Bauer, Pierson, Plymouth		
2	54	38.72	A. B. K. Y. D.	Geo. M. Allee, Newell, Buena Vista		
3	41	38.42	Iowa 119	Smith Bros., Center Jct., Jones		
4	31	37.47	Silvermine	Geo. M. Herriman, Manson, Calhoun		
5	25	37.34	R. Y. D.	Roy J. Clappitt, New Providence, Hardin		
6	34	37.31	Imp. R. Y. D.	A. J. & Glenn V. Anderson, Sumner, Bremer		
7	30	37.21	Imp. Y. D.	T. A. Chantland, Badger, Webster		
8	42	37.08	"E"—(KS)	Geo. M. Allee, Newell, Buena Vista		
9	29	36.84	Y. D. Big Yielder	Otto Walther, Waverly, Bremer		
10	47	36.83	Edwin Witter, Storm Lake, Buena Vista		
11	40	36.40	Osterland's Y. D.	H. F. Osterland, Faulkner, Franklin		
12	36	35.89	R. Y. D.	J. N. Horlacher, Storm Lake, Buena Vista		
Entry Bu. per			Entry Bu. per			Rank
Rank	No.	acre	Rank	No.	acre	
13	35	35.84	22	59	34.27	30
14	38	35.76	23	61	34.11	49
15	37	35.43	24	50	34.08	33
16	32	35.37	25	55	34.03	33
17	48	35.03	26	52	33.98	45
18	26	34.96	27	60	33.75	56
19	51	34.79	28	44	33.41	57
20	43	34.47	29	27	33.39	34
21	28	34.35				35
						58
						30.07
						46
						29.51

South Central Section

Entry Bu. per			Variety	Name—Address—County		
Rank	No.	acre				
1	70	51.33	F ₁ Hybrids	U. S. D. A.		
2	77	45.11	Copper Cross	Geo. Kurtzwell, Des Moines, Polk		
3	66	41.18	Ioleaming	J. R. McNeilly & Smith, Center Jct., Jones		
4	75	40.30	Leaming X White Pearl	Cassady & Wallace, Des Moines, Polk		
5	84	40.21	Bloody Butcher X White Pearl	Cassady & Wallace, Des Moines, Polk		
6	76	39.10	Black's Y. D.	E. H. Slocum, Minburn, Dallas		

7	69	38.80	Bass Y. D.	W. T. Bass, Waukeee, Dallas
8	93	38.84	Krug	Chas. D. Kirkpatrick, Keota, Keokuk
9	94	38.16	Lemon Yellow	Albert A. Miller, Ogden, Boone
10	68	38.00	R. Y. D.	Wm. Durkes, Dallas Center, Dallas
11	88	37.31	R. Y. D.	Geo. Steen, West Liberty, Muscatine
12	72	37.01	Wilson's Y. D.	A. Wilson, Harlan, Shelby
13	90	36.95	Iowinner	J. N. Smith & McNeilly, Center Jet., Jones

			Entry Bu. per			Entry Bu. per		
Rank	No.	acre	Rank	No.	acre	Rank	No.	acre
14	85	36.77	23	95	34.81	31	102	31.62
15	99	36.55	24	101	34.53	32	74	31.50
16	73	36.34	25	71	33.65	33	79	31.24
17	80	35.81	26	78	33.59	34	97	31.08
18	65	35.61	27	100	33.00	35	92	30.41
19	67	35.31	28	98	32.15	36	87	29.25
20	82	34.97	29	89	32.10	37	91	28.80
21	96	34.93	30	83	31.83	38	86	28.78
22	81	34.92						

Southern Section

Rank	Entry No.	Bu. per acre	Variety	Name—Address—County
1	113	58.99	Walden Dent	C. D. Kirkpatrick, Keota, Keokuk
2	123	57.75	Leaming X White Pearl	Cassady & Wallace, Des Moines, Polk
3	116	56.90	R. Y. D.	F. J. Haas, Shelby, Pottawattamie
4	117	56.57	Reid's Imp.	J. H. Petty, Elliott, Montgomery
5	120	56.53	B. B. R. Y. D.	Bliss Bros., Diagonal, Ringgold
6	115	56.34	Krug Yellow Victor	Iowa Seed Co., Des Moines, Polk
7	118	53.84	R. Y. D.	A. T. Mann, Thurman, Fremont
8	109	52.93	Prairie View Y. D.	W. A. Hollowell, Melcher, Marion

			Entry Bu. per			Entry Bu. per		
Rank	No.	acre	Rank	No.	acre	Rank	No.	acre
9	108	52.68	15	125	50.59	20	107	46.14
10	127	52.66	16	111	50.24	21	106	45.85
11	114	52.48	17	121	49.87	22	112	45.66
12	122	52.45	18	105	49.61	23	128	45.06
13	124	51.68	19	119	49.35	24	110	44.72
14	126	51.14						

SUMMARY OF PREVIOUS YEARS' RESULTS

It is reasonable to believe that a test running over a period of years is more reliable than one of only one year duration, and for that reason it is believed much significance should be attached to the winners of the test over a period of several years. The names listed are the top-third in each section for the period shown.

FIVE YEARS, 1920, 1921, 1922, 1923, 1924

Northern Section

Rank	Name	Address	County	Kind of Corn
1.	Theo Gronna.....	Waterville.....	Allamakee.....	Silver King

North Central Section

1.	Farm Crops Section..	Ames.....	Story.....	Iodent
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South Central Section

1.	Geo Steen.....	West Liberty....	Muscatine.....	Reid's Y. D.
2.	Clyde Black.....	Dallas Center....	Dallas.....	Black's Y. D.

Southern Section

1.	Fred McCulloch.....	Hartwick.....	Iowa.....	McCulloch's High Yielding Y. D.
2.	C. D. Kirkpatrick....	Keota.....	Keokuk.....	Walden Dent

FOUR YEARS, 1921, 1922, 1923, 1924

Northern Section

1.	Henry Schleusner.....	Garner.....	Hancock.....	Silver King
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North Central Section

1.	Farm Crops Section..	Ames.....	Story.....	Iodent
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South Central Section

1.	Geo. Steen.....	West Liberty....	Muscatine.....	Reid's Y. D.
2.	Clyde Black.....	Dallas Center....	Dallas.....	Black's Y. D.

Southern Section

1. Fred McCulloch.....Hartwick.....Iowa.....McCulloch's High
Yielding Y. D.
2. John Farquhar.....Blanchard.....Page.....Reid's Y. D.

THREE YEARS, 1922, 1923, 1924

Northern Section

- | Rank | Name | Address | County | Kind of Corn |
|------|-------------------|---------------|----------------|----------------------|
| 1. | G. V. Giffin..... | Ringsted..... | Palo Alto..... | Giffin's Silver King |

North Central Section

1. Farm Crops Section...Ames.....Story.....Iodent
2. Geo. M. Allee.....Newell.....Buena Vista.....A. B. K. Y. D.

South Central Section

1. Geo. Steen.....West Liberty.....Muscatine.....Reid's Y. D.
2. Wm. Durkes.....Dallas Center.....Dallas.....Reid's Y. D.
3. L. H. Mendenhall....Earlham.....Dallas.....Reid's Y. D.

Southern Section

1. Bliss Bros.....Diagonal.....Ringgold.....B. B. R. Y. D.
2. C. D. Kirkpatrick....Keota.....Keokuk.....Walden Dent

TWO YEARS, 1923, 1924

Northern Section

- | Rank | Name | Address | County | Kind of Corn |
|------|----------------------|-----------------|------------------|----------------|
| 1. | Wm. B. Smith..... | Nashua..... | Floyd..... | Smith's Y. D. |
| 2. | Wm. McArthur..... | Mason City..... | Cerro Gordo..... | Golden King |
| 3. | Hoyt E. Buttolph.... | Mitchell..... | Mitchell..... | Golden Murdock |

North Central Section

1. Geo. M. Allee.....Newell.....Buena Vista.....A. B. K. Y. D.
2. H. F. Osterland....Faulkner.....Franklin.....Osterland's Y. D.
3. Jesse Bige.....Cedar Falls.....Black Hawk.....Black Hawk R. Y. D.
5. Carl Bauer.....Pierson.....Plymouth.....Wimple's Y. D.
5. Axel T. Anderson....Paton.....Webster.....Reid's X Leaming

South Central Section

1. Geo. Steen.....West Liberty.....Muscatine.....Reid's Y. D.
2. Albert A. Miller....Ogden.....Boone.....Lemon Yellow
3. Wm. Durkes.....Dallas Center.....Dallas.....Reid's Y. D.
4. Clyde Black.....Dallas Center.....Dallas.....Black's Y. D.

Southern Section

1. C. D. Kirkpatrick....Keota.....Keokuk.....Walden Dent
2. F. J. Haas.....Shelby.....Pottawattamie....Reid's Y. D.
3. J. H. Petty.....Elliot.....Montgomery.....Imp. Reid's Y. D.
4. Bliss Bros.....Diagonal.....Ringgold.....B. B. R. Y. D.

PLAN OF THE 1925 TEST

The plan of the 1925 test is somewhat different from that of the past five years. The plan in brief is as follows:

(1) The state has heretofore been divided into four sections—Northern, North Central, South Central, and Southern. Each section this year will be divided into three districts as indicated by the map. Entries may be made in one or more of the twelve districts.

(2) All entries in any one district will be grown side by side a sufficient number of times to insure accurate results.

(3) A number will be assigned each sample when received by the Secretary of the Iowa Corn and Small Grain Growers' Association so that the name of the competitor will not be used or known until the final yields have been computed.

(4) All yields will be based on sound, shelled corn with a uniform moisture content.